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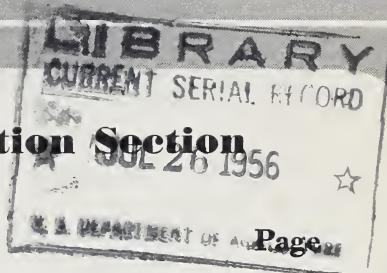
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Electrification Section



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ATOMIC HUDDLE

At REA-sponsored conference on atomic energy in May, reports on nuclear generating plans were given by three managers: (l. to r.) Edward E. Wolter, Minnesota; Ray Schacht, Nebraska; and John Keen, Michigan. For this and other rural atomic power developments, see article, page 3.

A Birthday Message

THE WHITE HOUSE
WASHINGTON

May 10, 1956

Dear Ancher:

Please extend my greetings to all who will be present at the observance of the twenty-first anniversary of the REA.

By bringing light and power -- and now the modern telephone -- to rural areas, this program has made living more pleasant and work more productive for millions of Americans. REA has provided an outstanding example of Federal-local partnership for progress. I congratulate all who have contributed to this partnership: the dedicated and capable Federal personnel, and the farmers and ranchers who have the ultimate control over action taken under the program. And I add my warm personal congratulations to you on the splendid service which you have given to REA and to the Nation during your term as Administrator.

As REA continues to move ahead, I am confident its success in the future will match its accomplishments in the past.

Sincerely,



The Honorable Ancher Nelsen
Administrator
Rural Electrification Administration,
Washington, D. C.



Into The Atomic Age

NO ONE can be sure how soon the first nuclear-powered generator designed for sending energy into a rural electric system will go into operation.

But several events in recent weeks have helped to bring the atomic age closer to practical realization for rural people living in high cost and power-hungry areas. These were:

- (1) Approval in principle by the Atomic Energy Commission of proposals by the Rural Cooperative Power Association, Elk River, Minn., and Wolverine Electric Cooperative, Big Rapids, Mich., to build power plants powered by nuclear reactors.
- (2) Approval by REA of a \$6,702,000 loan to the Elk River cooperative for new generation and transmission facilities which would be required and used in connection with the proposed nuclear reactor.
- (3) The first conference of REA-financed rural power suppliers for the specific purpose of discussing atomic energy matters.

These events themselves give no easy assurance that all the problems involved in harnessing the atom for generation of electricity have been licked. But they are first steps toward the building and operating of nuclear power plants which will bring answers to many questions and clear the way for reactors capable of producing power competitively.

Participants in the REA conference, held May 14 in Washing-

ton, explored the status of the atomic reactor program. The conference was attended by nearly 100 persons, representing rural power suppliers and equipment manufacturing firms from all sections of the country, including Alaska and Puerto Rico.

Congressional representatives warned against over-optimism concerning atomic power costs, particularly for small systems.

Senator Clinton P. Anderson, New Mexico, predicted that "it will be a long time before atomic energy supplants conventional fuels, although it may supplement them fairly soon."

Representative W. Sterling Cole, New York, pointed out that Government-financed rural systems have the same eligibility for participation in atomic energy development under the Atomic Energy Act as any other type of electric enterprise.

Interest centered naturally on the two proposals which have won tentative approval by AEC as a basis for further negotiation. These were explained in some detail by the managers of the Wolverine Electric Cooperative and Rural Cooperative Power Association and personnel of the firms designing the reactors.

Wolverine's John Keen described the cooperative's plan for

an experimental reactor of the homogeneous type. The fuel is a uranium salt dissolved in heavy water. In this type of reactor essentially all that is needed to make the nuclear reaction go is a tank of the proper size and shape filled with the uranium solution. The nuclear reaction heats the heavy water solution which then goes to a heat exchanger. The heat is sufficient to cause water on the other side of the tubes to boil, forming steam. The uranium salt solution then returns to the reactor vessel for further heating. This primary circuit operates under high pressure to prevent boiling of the reactor solution.

A superheater fired by coal, oil, or gas will be used to raise the temperature of the steam formed in the heat exchanger before it goes to work in the turbine generator. The reactor designed by the Foster-Wheeler Corp. will be large enough to supply two 5000-kw steam turbines, but the second will not be installed until the load justifies it. Target date for completion of the plant is mid-1959.

The Michigan borrower favors this reactor type over the use of

metal-clad fuel rods, because, in an area of high transportation costs, it avoids the expense of shipping out depleted rods and bringing in replacement elements.

Elk River Reactor

An atomic plant so simple that you "walk in just once a year for maintenance and to change the fuel" is the hope of the Elk River G-T cooperative, Manager Edward E. Wolter explained.

RCPA chose the heterogeneous boiling water reactor design (see May 1956 RURAL LINES, p. 12) developed by the American Machine and Foundry Company. The nuclear fuel is in the form of metal-clad elements. Steam formed in the reactor goes to a heat exchanger or boiler where new steam is formed. The temperature of this secondary steam is raised in an oil or coal-fired super heater before it is used to power a conventional turbine generator.

Elk River's new loan, is for a conventional 22,000-kw steam generating plant to be located in the Co-op's present steam generating plant. The \$6,702,000 loan also includes funds for associated facilities, including a headquarters building and 186 miles of 69-kv transmission line. If the reactor proposal now being negotiated leads to a contract with AEC, the co-op would not build the conventional steam boiler, but would purchase steam from the reactor to be financed and owned by AEC on a site provided by the cooperative.

The conference also heard reports on other types of reactors being considered under AEC's Power Demonstration Reactor



Intent on discussion at atomic conference are A. L. Taylor (left) and Parks E. Baker, representing Seminole Electric Cooperative, Madison, Fla.

Program. First to be discussed was the 75,000-kw sodium-graphite power plant that Consumers Public Power District wants to build near Lincoln, Nebr.

Consumer's Manager Ray Schacht estimates that this \$25 million plant would produce power at a cost of 10-12 mills per kwh, well in excess of costs from conventional plants. He also estimates that operating labor costs may be 2 to 2½ times conventional plant levels. These may be offset partially by revenue from reactor byproducts. These estimates are based on 15-year depreciation and 60 percent plant factor.

Louis H. Roddis, Jr., deputy director of reactor development for AEC, reviewed several possibilities for developing economic small power reactors, including those under consideration in the second-round reactor program.

Operating Costs Unknown

"Nuclear plant development is now bringing the first (construction) costs of these plants near the point where they will be allowable in a competitive situation," Mr. Roddis said, "The biggest unknowns are in the region of operating costs. Only actual operation of nuclear plants will determine their operating costs with any degree of reality.

"It is most important that we get along with the building and operating of some nuclear power plants. It is equally important that we keep before the builders and operators the incentive to do a good, efficient, and inexpensive job," Mr. Roddis added.

An Alaska borrower, the Chugach Electric Association, An-

chorage, has proposed construction of a 10,000-kw reactor using sodium as the coolant and heavy water as the moderator. Use of the liquid metal would eliminate corrosion and pressurizing and make possible quite high temperatures. Heavy water would keep the fuel loading small, make for efficient use of neutrons and simplify control.

Small Plant Possibility

Parks E. Baker, president of the pioneering Seminole Electric Cooperative, Madison, Florida, reported that lack of standby power and transmission facilities made it impossible for his group, the first among REA borrowers to get a study agreement with AEC, to submit a proposal in the second round reactor program. The Seminole study agreement has been changed to an access permit and the group will continue to explore every possible method for nuclear power generation. Mr. Baker added that the answer to their problem, and that of other rural systems without installed generating facilities, may lie in individual small reactor-powered plants which will enable adjoining cooperatives to supply standby power to each other in emergencies and eliminate costly transmission systems.

Mr. Baker perhaps reflected a feeling shared by those who attended the REA conference when he spoke of his group's experience in this new field. Despite inability to submit a proposal in the second round, "Our interest and optimism over the future of nuclear power has not diminished — if anything, it has increased," Mr. Baker stated.

Staff of Arkansas Borrower Sees Power Use Program as

A Year-Round Job

DON'T let good times and a high DSER lead you to let up on your load-building program. Keep your business in sound financial shape and get ready for consumption slumps by pushing power use the year-round.

That's the way Arthur F. Crowell, manager of First Electric Cooperative Cooperation, Jacksonville, Ark., looks at the job of keeping a co-op's business fit and sound.

Even with a DSER of 113 percent, he and the farm electrification staff have gone all out to get more and more load on the line. In four years, monthly power usage of the 8,900 farms stepped up from 77 to an average of 128 kwh per farm, even though First's 10-county area has one of the lowest average farm incomes in Arkansas.

"We've tried just about everything along the power use line," says Mr. Crowell. "Our best bets have been our all-electric home program, house-to-house lamp selling and servicing, promotion of crop storage aerators, light-conditioned home demonstrations, hot bed and irrigation installations, plus a very useful appliance survey. The way we see it, co-ops have to 'make hay while the sun shines.' You can't afford to let power use work slow down."

First's farm electrification advisers, Mrs. Iva Grey Taylor, Mrs. Ocrie Lambert, Nina Ann Brown and W. L. Lemons, are old hands at power use. Each of the women advisers is handy with tools, trained to follow electric "specs." It's all in the day's work to help a farmer do a wiring job or lay out a barn electric system. Frequently on their rounds, they pitch in and assist farmers in construction work and farm chores. To members, they are more than advisers. They are their friends.

Manager Crowell is proud of the results his advisers are getting.

The "girls," as we'll call them, go into farm homes and demonstrate white goods and small appliances sold by dealers. Meetings are easy to stage and entertaining. At a suggestion from one of the advisers, the farm wives invite their friends, relatives and neighbors over to see a "showing" of a new appliance. Turnouts are small, but they have already accounted for many a hot sales tip for local dealers.

One of the girls' biggest services has been in the field of better home lighting. The co-op wired and "light-conditioned" four pilot homes, sold the necessary materials at cost to the owners. Open house lighting demonstrations put on by the trio resulted in changes

which improved the lighting of 5 schools and 15 homes.

Along with their demonstrations, which number about 150 a year, each woman adviser helps homemakers plan modern kitchens, decorate and remodel, wire and rewire farm homes. Rural members like this service so well they are now asking for more of it.

Mr. Lemons, a former vocational ag teacher, has had equally good results with the all-electric homes he engineered. Seventeen of these deluxe homes have been completed so far and more are on the way. The homes include three old ones wired for panel heating. New homes are radiant heated.

The co-op uses the "pilot" plan in home heating promotion too. It engineered five pilot homes and furnished heating and wiring materials at cost to the owners.

Promotion of all-electric homes is handled in this way. First step is to locate a contractor or house builder who is remodeling or constructing a farm home. Then Mr. Lemons' job is to sell radiant heat. If the builder selects radiant heating, Mr. Lemons lays out the system and gives technical assistance to the electrician wiring the job. Next he keeps close tab on things to see that the work is done right.

The pilot all-electric homes—using around 18,500 kwh per year—are showplaces in their communities, and First Co-op makes the most of them. Open-house is an all day affair during which the

"girls" are on hand to demonstrate and cook meals for the guests. Household appliances, along with radiant heat, are feature attractions. Power use staffs from neighboring co-ops are generally invited to the pilot shows.

Irrigation of rice, row crops and pastures has been expanding in the area since Mr. Lemons began conducting evening irrigation classes for members. He uses visual aids liberally and calls on the aid of the county agent and Soil Conservation Service technicians.

But that's only part of the job of selling electrified irrigation to farmers. Mr. Lemons takes to the field, works side by side with the farmer, to figure the amount of water needed to irrigate crops and the best system for his needs. The combination of technical aid plus night classes helped sell some 75 multi-phase motors to irrigators.

Mr. Lemons has also kept a close eye on farm production and choring equipment as load builders. Guidance he gave farmers in planning bins for crop storage aerators helped sell 40 of the units. The assistance he gave seed and nurserymen in laying out heating systems had a lot to do with 30 hot bed installations.

Now back to Manager Crowell. He explains, "Our farm electrification advisers have been doing a great job for us. But our three consumer servicemen are right behind them in load building.

"One of our servicemen, J. A.

Staff of First Electric Co-op meets frequently to map new sales strategy. Manager Arthur F. Crowell (center) outlines plans to power use advisers (from left) W. L. Lemons, Iva Gray Taylor, Oerie Lambert, and Nina Ann Brown.



Middleton, is a whiz at helping farm folks to use more electricity. He used to go down the road calling on each house. He helped so many farmers with their electric problems, people all over his territory are asking for him. His services are largely on a first-come, first-served basis now.

"By giving electric service, Middleton advances the sale of lamps. He's sold better than 450 lamps of various types, an average of one sale per call.

"When Middleton calls he offers to check the voltage and see if circuits are overloaded. He also repairs equipment and does needed wiring. Should appliances require major repairs, he hauls them back to our shop where they are fixed free and returned. We furnish materials at cost.

How Serviceman Sells

"Before long Middleton talks home lighting and shows the size and types of lamps he carries. Farmers find it hard to pass up our lamp offer. We sell lamps at cost and on terms as low as 57¢ down, the balance to be added to the light bill at the rate of three \$1 monthly payments. Higher priced lamps are sold on time too.

"Middleton's home call doesn't end there. He replaces burned out bulbs, makes faulty light fixtures work. Before saying adieu, he aims to learn what new appliances the farmer plans to buy. Sales tips go to the farm electrification advisers who give them to dealers.

"That's a lot of service and selling for one man to pack into a home call. But our servicemen have their routine down pat and average seven to eight calls daily."

First Co-op's consumer appli-

ance survey, conducted every two years, has paid off in a number of sales for dealers, and valuable information for the management.

A letter and survey card introduces the fact-finding to members. The questionnaire is similar to other survey cards. It includes questions like, "What appliances have you?" and "What appliances do you aim to buy?" Information on each card is carefully recapped and catalogued by local communities. Thus the co-op can furnish dealers with accurate data on "prospects" in their trade areas.

Low Saturation Pinpointed

From the community tabulations, the co-op's farm electrification staff records survey data on four large "saturation" maps, one for each service area. The maps help advisers to pinpoint low appliance usage sections and show where aggressive load-building promotion is needed. Survey information also indicates where lines require heavying up.

It's a popular survey. Members don't mind furnishing data and dealers like the sales tips it produces. It's been mighty useful to the co-op too.

It all adds up to a firmer, better balanced load for First Co-operative. And as Mr. Crowell will tell you, "Times look good today, but if things slow down we're set for it. We think our power use planning will pull us through."

Set Dates for Workshop

The Inter-Industry Farm Electric Utilization Council will hold its third annual National Power Use Workshop October 15-16 in the Milwaukee, Wis., Auditorium.

Tri-State G-T Loan

New System Would Assure Supplementary Power in West

TO MEET the growing power needs of consumers served by 24 rural electric distribution systems in Colorado, Nebraska and Wyoming, REA made a loan of \$9,968,000 early in May to a new G-T borrower, the Tri-State Generation and Transmission Association of Sterling, Colo.

The loan would enable Tri-State to construct a 44,000-kw steam generating plant to supplement the power being provided to its member systems by the Bureau of Reclamation. The loan also provides for 20 miles of 115-kv transmission line to connect the new plant with Bureau facilities.

In 1952 the Bureau of Reclamation informed Tri-State members that it would be unable to supply all their power requirements indefinitely. Since that time Tri-State has been seeking additional sources of power. Even though the loan has been made, Tri-State officials said they will continue work with the Bureau and other power suppliers in the area to develop a power supply plan that will result in the lowest possible cost. Meanwhile, approval of the loan gives Tri-State co-ops assurance of adequate power supply for the consumers they serve.

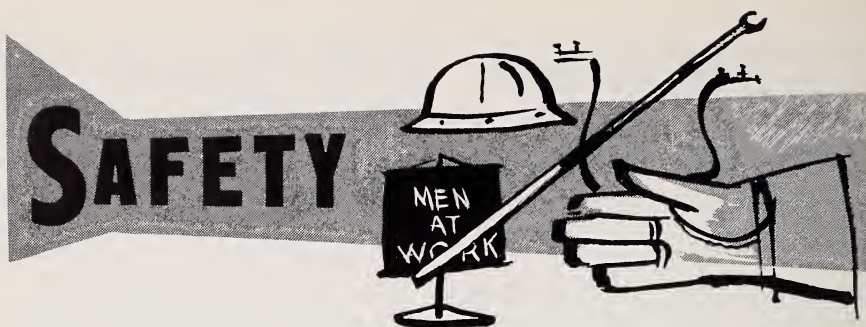
Other G-T loans were made by REA in May as follows:

Rural Cooperative Power Association, Elk River, Minn. (See details in story beginning on page 3 of this issue.)

Plains Electric Generation and Transmission Cooperative, Albuquerque, N. Mex., a \$3,905,000 loan to finance a new 16,500-kw steam generating unit in its Algodones plant and associated facilities. At the same time, REA approved a contract negotiated by the cooperative with the Public Service Company of New Mexico calling for 10,000 kw of firm power and a reserve of 16,500 kw. The new loan and the contractual arrangement will enable the Plains Cooperative to meet the growing needs of its member systems at the lowest cost of any available plan, estimated to average between 9½ and 10 mills per kw-h.

Minnkota Power Cooperative, Grand Forks, N. Dak., a \$2,786,000 loan to finance 140 miles of 69-kv transmission line, 30 miles of 115-kv line, other related facilities and necessary system improvements. Minnkota is in the process of assuming the loan and taking over the facilities of the Border Counties Power Cooperative of Warroad, Minn., a generating co-op with two member systems.

The Brazos Electric Power Cooperative, Waco, Texas, a \$7,500,000 loan to construct a new 33,000-kw generating plant in the northern end of its system and to build 108 miles of 69-kv transmission line. Brazos needs more power to supply the growing loads of its 19 member distribution systems in east central Texas.



National Farm Safety Week – July 22 - 28

The President of the United States has proclaimed the week beginning July 22, 1956, as National Farm Safety Week and requests all persons and organizations interested in farm life and welfare to join in this annual campaign to reduce the tragic loss of life from accidents.

National Farm Safety Week is sponsored by the National Safety Council and the U. S. Department of Agriculture, in cooperation with the State agricultural extension services, farm organizations, the farm press, radio, television and other interested groups. They seek the help of other local agencies, including REA borrowers, in making farm people more safety-minded.

About 14,000 farm residents lose their lives in accidents each year, and 1,200,000 are seriously injured. More work deaths occur in farming than in any other major industry. Farm accidents cause an annual economic loss of about \$1.5 billion. Home injuries lead among nonfatal accidents, but the motor vehicle is the principal killer of farm people.

REA Steps Up Safety Program

REA has acted to step up safety activities supporting the effective work of its electric borrowers and the state safety and job training committees.

Two highly skilled safety engineers—A. B. (Jack) Shehee, a long-time REA employee, and E. D. Hughes, a new member of the staff—are now available to work

with the area offices and borrowers. They will handle assignments both in Washington and the field, giving attention to management safety programs, craft safety training, and public safety. The area offices will give more time and attention to the management phase of borrower safety programs, and borrowers are



A. B. Shehee



E. D. Hughes

urged to make known their needs along this line.

Mr. Shehee has been a member of the REA staff for 14 years. He has been a leader in the expansion of the craft safety training program and has been advanced in recognition of his outstanding ability and service.

Mr. Hughes came to REA from the Navy Department. He has a wide and varied background of responsible experience in utility distribution and transmission work, steam generating plants, activities relating to nuclear facilities and industrial operations in industry and Government.

POWER USE EXCHANGE

Manager Reuben Dooley of the Parke County Rural Electric Membership Corporation, Rockville, Ind., recalls that two years ago the co-op made arrangements to furnish 100 ampere service entrance installations for meter poles. To keep pace with the growth of farm use of electricity, the co-op has arranged for 200 ampere installations for members. About 40 percent of the members

have electric water heaters, thanks to free planning and wiring service, plus a special 1¢ water heater rate for 300 kwh per month.

Twelve dealers cooperating with the Morgan County Rural Electric Membership Corp., Martinsville, Ind., sold 136 major appliances in 77 days of promotion and farm calls. In a separate campaign, a dealer in Spencer, Ind., sold 24 major appliances in making 25 "on-the-farm" calls.

FUNDS FOR 1957 REA PROGRAMS

On June 4, the President signed the 1957 Appropriations Act providing funds for the Department of Agriculture, including REA. The Act provides REA funds as follows (shown as compared with the present year):

	1956 Appropriations	1957 Appropriations
Salaries and Expenses	\$8,135,785	\$8,600,000
LOAN FUNDS:		
Electric, including reserve	\$260,000,000	\$214,000,000
Telephone, including reserve	75,000,000	100,000,000
Total	\$335,000,000	\$314,000,000

In addition to the above authorizations, there will be available in fiscal year 1957 an estimated carryover of \$24 million and rescissions of \$1 million for electric loans.

The telephone authorization will be supplemented by about \$30 million in carryover and \$1 million in rescissions.

POWER



A SIMPLE, flexible stamp "incentive program" with a great load-building potential is winning popular dealer and member acceptance in the area served by Caddo Electric Cooperative of Binger, Okla.

As Caddo's manager, J. W. Bryan, explains things stamps are used to help members help themselves, overcome problems of idle services, high consumer peaks and capital credits and tell what appliances are going on the line.

Caddo's stamp program, called "Membership Participation Stamp Plan," was launched in February this year. Under the plan, the co-op issues two stamps for each dollar of its annual revenues (currently about \$500,000). The members get stamps in two ways—by paying their electric bill and by purchasing appliances from participating dealers. The consumer receives two stamps for each dollar of such payments.

To use his stamps, the member saves them in a book and redeems them in the form of electric appliances listed as premiums and available from approved dealers. For this purpose stamps are normally credited at the rate of 40 per \$1. In other words a premium with a retail price of \$10 can be

obtained for 400 (10 times 40) stamps.

For flexibility, the number of stamps required can be reduced on occasion to promote especially desirable types of appliances. Caddo plans to announce double value months and other variations from time to time. Stamps are given for credit sales as well as for cash, but only when bills are paid in full.

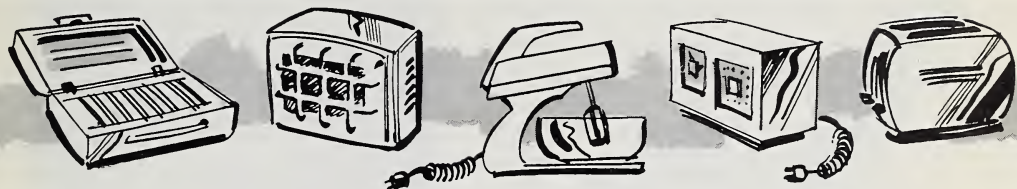
Says Mr. Bryan, "Like many borrowers, Caddo was stuck with the task of building load and faced some tough problems. We had high summer peaks due to irrigation and air-conditioning.

"The stamp fad going on over the country caught our eye. Everyone had a stamp book or two. Stamps were given for gas, groceries, hardware, building materials. In fact it seemed to us that stores using the stamp gimmick got most of the business. The stamp idea looked good to us. So, we thought, why not use them to build load, help dealers sales and give our members a break.

"The stamp plan we worked out distributes any desired part of the margins and assures us that the amount so distributed will eventually be invested by the members in equipment, which, in turn, in-

Is Load and Gives Members a Break With

USE STAMP PLAN



creases our electric revenue.

"Caddo was doing business with only three dealers before setting up the stamp plan. Today 20 dealers and 14 collecting agencies are cooperating in our new program. Our arrangement with dealers helps us keep tab on the number and location of appliances going on the line as dealers must report stamp information to us."

At present Caddo has no premium catalogues for participating members. Members select items from manufacturers' catalogues, or from the assortment of small appliances displayed in the co-op's office in Binger. Each premium is neatly tagged with the "cost" in stamps.

Several other Oklahoma electric borrowers are understood to be considering applying the stamp plan to their operations. In event this occurs, Caddo's management believes the co-ops may put out a single general premium catalogue. There is also talk of manufacturers and jobbers joining with Caddo in publication of an illustrated stamp price list.

Caddo announced its stamp feature with an aggressive advertising fanfare. Newspapers were furnished with special material, type slugs and mats for use in

dealer advertising. Members read about what stamps would do for them in the co-op newsletter, listened to stamp "commercials" via radio. Stamps given as door prizes at demonstrations, meetings, etc. stirred up member interest.

It's far too early to tell how much added revenue and kwh the stamp plan will net the first year. But with \$500,000 of annual revenue subject to the plan, that's 1 million stamps to be given away this year in an 8-county area.

Suppose 80 percent of those stamps are redeemed as expected. That means \$20,000 of additional consumer purchases of appliances that use kwh.

As Manager Bryan says, "We hope to increase our average farm home load factor from 42 to 60 percent with stamps. The program has put some new kwh on the line already and has led to greater promptness in paying electric bills. And stamps will help get our surplus funds into the hands of the members where they belong."

NOTE: This stamp program is copyrighted. Borrowers interested in using the plan may communicate with the Caddo Electric Cooperative, Binger, Okla., for full information.

PIONEER

This month's pioneer is one who worked with a group of farmers to get electric power for 5 years before the establishment of REA, and has continued to work for the program ever since.

C. G. McDermott, an Irish Canadian by birth, came to the United States in 1910, and settled in Montana to farm. He operates a 160-acre stock-dairying farm near Fairfield, Mont. He also raises small grains, and all but 16 acres of his land are under irrigation.

Mr. McDermott recalls how the group of farmers was organized, how they rode up and down the valley getting signers, and how they tried to get central station electric service. Everyone else thought farmers would not use enough power to make it pay to build lines. But these people were persistent, and some 2 years after REA was set up, their first section was built and energized.

In the beginning, the Sun River Electric Cooperative had about 250 members, Mr. McDermott says. Today, more than 2,300 members receive electric power over some 1,849 miles of line. They use an average of 603 kilowatt-hours of electric power a month.

Talking to Mr. McDermott, you can see that he is proud of the record Sun River Electric has made. Not only was it among the



C. G. McDermott

early group of borrowers actually to provide service to members, it is now earning well in excess of debt service. This kind of record, he feels, justifies the vision of those early organizers.

Mr. McDermott is the only member of the original board still serving the co-op in an official capacity. He has been secretary-treasurer of the board since its organization, and has signed every membership issued by the co-op to date.

In his own farming operations, Mr. McDermott uses electricity extensively for lighting, heating, and pumping water, refrigeration and other household purposes. And he foresees great advances in the future in the use of electricity on the farm—to do farm chores and make it easier for fewer farmers to produce the food for a steadily increasing population.

RURAL LINES invites nominations of persons for recognition as pioneers of rural electrification. Send details with photographs to Rural Electrification Administration, U. S. Dept. of Agriculture, Washington 25, D. C.

Rural Lines

Telephone Section

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Bell Will Offer New Toll Settlements

Toll tickets like those Sharlane Applegate and Evelyn Harden of Davenport, Okla., are sorting in the picture below should be worth more soon to many REA telephone borrowers.

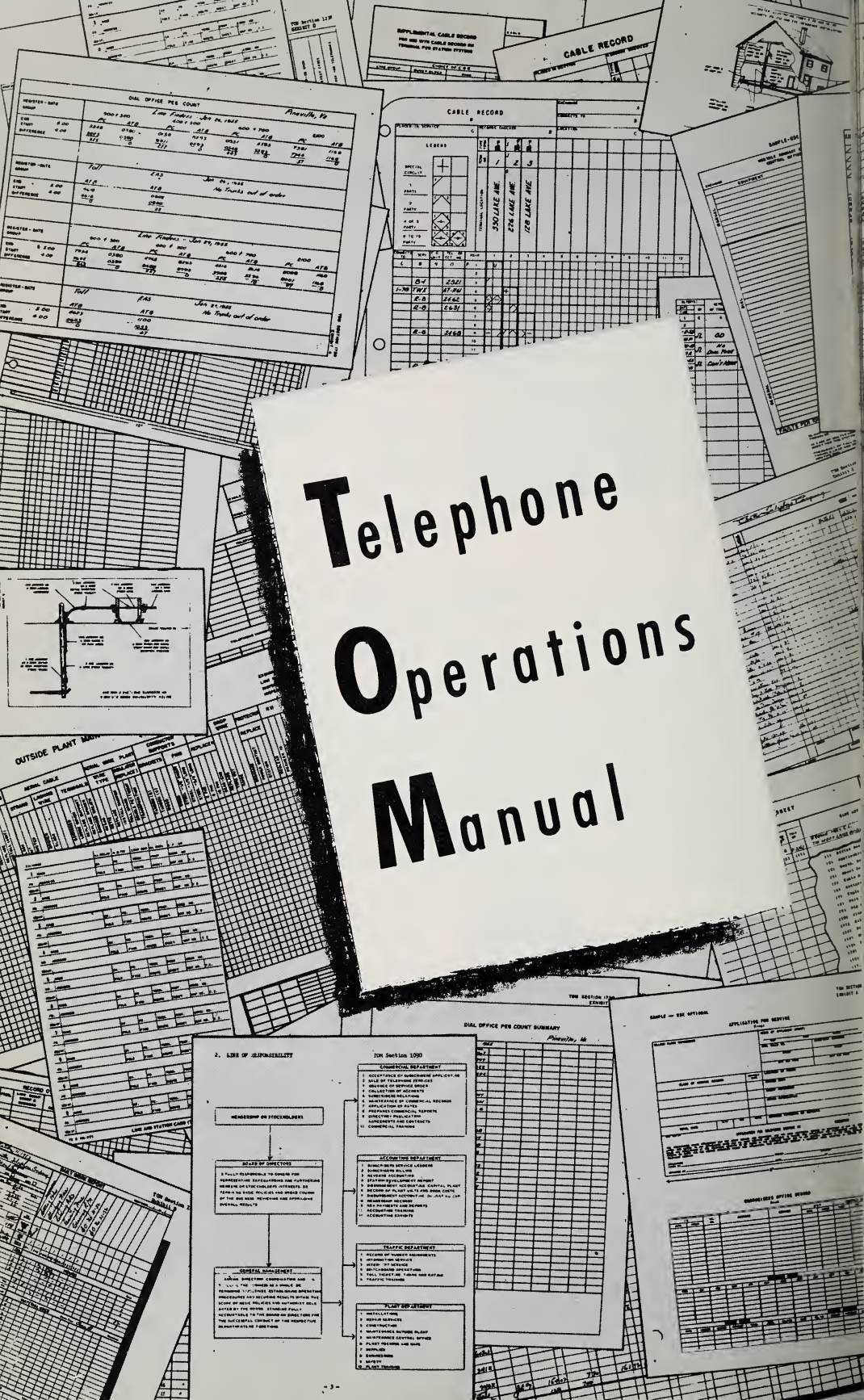
As this issue of RURAL LINES went to press, announcement was made that officials of the Bell System and of U. S. Independent Telephone Association, after long negotiation, have agreed on new recommended schedules for toll settlement. Changes may benefit Independent companies by about \$11 million annually.

New schedules, together with analyses of their effects, are being mailed by Bell subsidiaries to all companies and cooperatives with which they have toll settlement agreements. If new contracts are negotiated within 60 days after the offer is made, revised terms will date back to January 1956 billing. No company will be expected to enter a new contract unless it will benefit.

For news about Sharlane's and Evelyn's employer, the Central Oklahoma Telephone Co., see "It's a Great Day," p. 20.

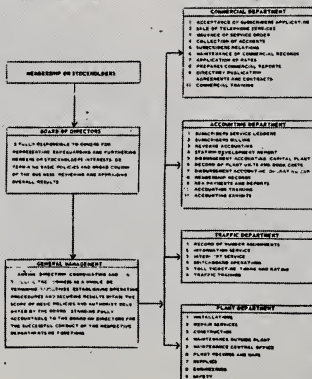


Telephone Operations Manual



2. LINE OF RESPONSIBILITY

DIAL SECTION 100



DIAL OFFICE PER CENT SUMMARY

DATE	PERCENT	REMARKS
1911	100	
1912	100	
1913	100	
1914	100	
1915	100	
1916	100	
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1918	100	
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SAMPLE - PER CENT

DATE	PERCENT	REMARKS
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THE REA Telephone Operations Manual is issued to telephone borrowers to assist management with its job of operating systems soundly so as to give better service to rural people.

The first sections of the manual went out in September 1953. New sections and information have been added frequently since that time. Today, management and operating staffs of telephone borrowers term it an increasingly helpful tool for working out day-by-day and long-range system problems.

Of course, the manual is no substitute for well rounded experience in the operation of telephone systems. One of its greatest values is to guide those who have knowledge of special fields to telephony but have never before had charge of over-all operations.

In several instances, borrowers with little experience have successfully set up operating records and procedures almost entirely from the manual, plus good common sense.

The manual is indexed under the headings of General, Plant, Commercial, Traffic and Accounting with sectional index sheets for each of these classifications. Revised indexes are issued periodically.

At present there are sections covering the formulation of operating policies, establishing lines of responsibility, budgeting, increasing revenues, reducing operating costs, making traffic studies, setting up plant operating records, maintaining the various components of plant, preparing tariffs, issuing directories, telephone accounting and billing and collecting. These are but a few of the items covered and explained in detail with suggested

procedures. Additional subjects will be covered as needed.

The manual's usefulness is not confined to the borrower's office. It has been widely used by REA, borrowers' groups, and individual borrowers in training conferences. Some of the procedures have been set up on charts and on slides for use as visual instruction aids.

The practices outlined are aimed at assisting management in providing adequate service to subscribers, maintaining the financial stability of the organization, meeting appropriate indebtedness and paying a return on invested capital.

REA has received numerous requests for the manual and individual sections of it. Many of these requests are from consulting engineers, accountants, industry associations and regulatory bodies. A special mailing list was made up to see that individuals and groups interested in the operations of REA-financed systems receive the same information furnished borrowers.

Here's what borrowers and others say about the manual:

The manager of a midwestern borrower—"I am preparing a report for each member of the board of directors, stressing the importance of 'operating policies' and 'public relations' that can be supplemented materially with copies of sections 1080, 1090 and 1490. Please send 11 copies of each. Three complete sets of sections are maintained in our office for ready reference by myself, the office manager and plant superintendent."

A manager on the Pacific coast—"It has been suggested by the

Public Service Commission that we obtain copies for our employees and office. We would appreciate very much four handbooks for our use. After looking at the contents we believe that it is a very valuable piece of information when classifying various construction projects in our outside plant."

An eastern seaboard manager—"I would like seven copies of section 1080, titled 'Operating Policies.' I would like these so that I can furnish each member of the board of directors with a copy for their help and information."

A state telephone association secretary—"We are planning some meetings on management and accounting and the manual will be of great help."

A staff member of a state regulatory body—"We would like to avail ourselves of some of the forms presented in the manual. Our men are doing inventory and original cost studies all the time and it is a continuous problem to keep forms that will fit into the work most satisfactorily."

A consulting engineer with a southern firm—"Quite recently we had some questions about preparing a work order request for one of our clients. We were able to obtain the information we needed from Section 1080.1."


A public accountant in the South—"I believe it will be of great help to us in our work with telephone companies."

You can get copies of the Telephone Operations Manual or individual sections for your organization by writing Telephone Operations and Loans Division, Rural Electrification Administration, Washington 25, D. C.



It Pays to Standardize

Helps Cut Costs, Speed Delivery of Dial Equipment



EVIDENCE is piling up in many fields that "industries wise, standardize." According to a study just made by REA's telephone engineers, standardization is becoming a major factor in both speeding deliveries and cutting the cost of dial central office equipment in the REA program.

Analyzing a 22 percent reduction since 1952 in the cost of such equipment, the engineers see the prospect of additional benefits to rural companies as new steps are taken to speed up the degree of standardization.

This is good news for telephone borrowers, whose investment in dial equipment is a big one. By early 1956, 291 borrowers had purchased or contracted for nearly \$22 million in dial switchboards. This comprised 126,310 lines in 1,112 central offices in 43 states.

Of course, it is not possible to standardize completely all features of central office dial equip-

ment, because invariably some tailoring must be done to fit special conditions existing in particular locations. Each of the 1,112 offices differs to some extent from the others. Basically, however, all equipment designs are capable of performing the same required functions.

Inasmuch as the equipment requirements fall into fairly set patterns, the six independent manufacturers of dial equipment who supply REA borrowers have been able to establish standard requirements for central office installations intended for this market.

Standardization offers several obvious advantages to manufacturers and telephone companies alike. It reduces the individual engineering normally required on central office equipment. Some manufacturers already are making basic components in advance of orders.

The specifications for central office equipment financed by REA loan funds are prepared by the borrower and its engineer on standard forms supplied by REA. The procurement of central office installations in the REA program ordinarily is handled through competitive bidding, and all manufacturers base their bids on the same "specs."

REA specification forms are reviewed and improved from time to time on the basis of experience of borrowers, their engineers and equipment manufacturers.

Look for more and more standardization when nationwide toll dialing becomes more widely accepted, say REA's engineers. Specifications for the borrowers include provision for meeting the developments in this field.

With Dial Service at Last,
Central Oklahomans Agree

It's a Great Day

OLD TIME residents of Davenport, Okla., say there's never been an event quite like the "dial cut-over" that took place on St. Patrick's Day this spring.

It was the second time that Davenport people had saluted their locally-owned Central Oklahoma Telephone Company. Two years ago businessmen and rural leaders set aside a "Telephone Day," closed shops, left farm chores and joined in a whirlwind equity sign-up.

The several hundred subscribers who came to town to give the new telephone system an enthusiastic sendoff spent a busy day. Their hosts were the Davenport Chamber of Commerce and L. L. (Dutch) Guest, president of the Central Oklahoma. The cut-over program included a visit to the new automatic dial exchange and an entertaining program in the high school auditorium.

At the auditorium subscribers heard Oklahoma's governor, Raymond Gary, Davenport's Mayor Harry Turpin and other leaders,

praise the new system and similar systems now reaching out into the country's rural areas.

The cut-over gathering topped the day by participating in a drawing of some 21 door prizes contributed by merchants and businessmen of the Davenport and Kendrick communities. Prizes ranged from a \$20 savings account to 50 baby chicks.

Behind the cut-over ceremonies is a story of community teamwork, of businessmen and farmers who worked shoulder to shoulder to put an equity drive over the top. Converting an old magneto system to dial and signing up new subscribers took a lot of spade work and hustle by young Guest and volunteer helpers.

Mayor Harry Turpin tells it this way:

"A dial system was long overdue in our area. Communication between buyer and seller, friends and neighbors, was pretty bad. It was real news when we learned that 'Dutch' Guest, who had taken

Oklahoma's Governor Gary joins Davenport civic leaders in salute to new dial telephone system of Central Oklahoma Telephone Co., in high school auditorium.



over his dad's telephone company, aimed to switch to dial.

"Dutch called on REA for a loan to do the modernizing job. He worked like a trooper collecting equity payments. He got a good many names on the line, but was still short of the equity sum needed to do business with REA.

"So our businessmen, school kids, and farm people pitched in to complete the signup. Our banker gave \$100 in prizes to help the drive along. He also offered to loan any prospective telephone subscriber up to \$100 on his own signature to buy preferred stock. Our merchants chipped in many prizes too.

"Some of us, along with Dutch, called house-to-house on rural people. Meetings were held to tell folks about the company's dial system. Soon dial service became the best advertised product in our area.

"Last we proclaimed a special 'Telephone Day.' We locked our doors and everybody worked to complete the signup. The school kids themselves sold nearly \$2,400 in preferred stock. In two months Dutch had the \$11,700 equity sum he needed in the bag and our new dial system was on the way. Big jobs are easy when people pull and work together. Any community can get the same results."

Today, the smooth-running dial system has a lot of boosters. Here's what some subscribers say:

Glen Nichols, Davenport merchant, and company board member—"People can now call a doctor when needed. We can now serve a radius of eight miles which means that around 500 people can call us. The commu-



President "Dutch" Guest (lower center) explains dial operation to visitors who are escorted through the exchange by his mother (second from left).

nity of Kendrick, which formerly had only one telephone, now has about 150 subscribers tied into the dial system. We're fortunate to have folks like the Guests head our telephone company."

Elliot Forbias, local banker, who was president of the Davenport Chamber of Commerce during the equity signup—"Our new telephone system blankets our entire trade territory. Going dial was the best thing that has happened in our area."

Mayor Turpin, oilman—"Dial service makes a big difference in communicating and in handling business around town and in rural areas. We also get better toll service now that we have five automatic circuits reaching out in all directions."

Mr. Guest is now negotiating for purchase of several nearby exchanges which he hopes to modernize with additional REA telephone loan funds.

Telephone Buildings going up



New telephone headquarters buildings completed and under construction in many areas attest to spread of REA rural telephone program. Stone and glass front, spacious grounds mark new home (above) of Old Town Telephone System, REA borrower at Winston-Salem, N. C. At left of entrance is drive-in depository (shown in use in inset). Pineland Telephone Cooperative, one of REA's earliest telephone borrowers, occupies new building (below) at Metter, Ga.





New headquarters of North Florida Telephone Co. is under construction (above) at Live Oak, Fla. Company has received REA loans in excess of \$3,000,000 for rural improvement and expansion program. New headquarters (below) of Horry Telephone Co., an REA borrower at Conway, S. C. is compact, air-conditioned.



**UNITED STATES
GOVERNMENT PRINTING OFFICE**

DIVISION OF PUBLIC DOCUMENTS

WASHINGTON 25, D. C.

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, \$300
(GPO)

Loans Approved April 2 Through May 16, 1956

Electrification

\$2,340,000 Rio Grande Elec. Co-op,
Brackettville, Texas
1,265,000 Eastern Iowa Light and Power Co-op,
Wilton Junction, Iowa
* 50,000 Riceland Elec. Co-op,
Stuttgart, Ark.
540,000 Cumberland Valley Rural Elec.
Co-op, Corbin, Ky.
65,000 Webster Elec. Co-op,
Marshfield, Mo.
694,000 Denton County Elec. Co-op,
Denton, Texas
490,000 Blue Ridge Elec. Co-op,
Pickens, S. C.
220,000 Central Rural Elec. Co-op,
Stillwater, Okla.
132,000 Howard Greeley Rural PPD,
St. Paul, Nebr.
1,150,000 Thumb Elec. Co-op,
Ubyly, Mich.
* 50,000 Carroll Elec. Co-op,
Berryville, Ark.
418,000 Adams-Marquette Elec. Co-op,
Friendship, Wis.
* 100,000 Santee Elec. Co-op,
Kingstree, S. C.
* 50,000 Tri-County EMC,
Goldsboro, N. C.
1,435,000 Southwest Ark. Elec. Co-op, Corp.,
Texarkana, Ark.
600,000 Haywood Elec. Membership Corp.,
Waynesville, N. C.
107,000 Otsego Elec. Co-op,
Hartwick, N. Y.
185,000 Consolidated Elec. Co-op,
Mexico, Mo.
* 150,000 Price Elec. Co-op,
Phillips, Wis.
76,000 Lamar County Elec. Co-op,
Paris, Texas
500,000 Minnesota Valley Elec. Co-op,
Jordan, Minn.
403,000 Northwest Iowa Power Co-op,
LeMars, Iowa
615,000 Tuscarawas-Coshocton Elec.
Co-op, Coshocton, Ohio
227,000 Pemiscot-Dunklin Elec.
Co-op, Hayti, Mo.
262,000 D. S. & O. Rural Elec.
Co-op, Solomon, Kans.
750,000 Southwest Rural Elec. Assn.,
Tipton, Okla.
106,000 Verde Elec. Co-op,
Cottonwood, Ariz.
315,000 Richland Co-op Elec. Assn.,
Richland Center, Wis.
* 50,000 Four-County EMC,
Burgaw, N. C.
* 150,000 Peace River Valley EMC,
Wauchula, Fla.
675,500 Randolph EMC,
Asheboro, N. C.

\$3,905,000 Plains Elec. G & T Co-op,
Albuquerque, N. Mex.
* 25,000 Waushara County Elec. Co-op,
Wautoma, Wis.
2,786,000 Minnkota Power Co-op,
Grand Forks, N. Dak.
233,000 Houston County Elec. Co-op,
Crockett, Texas
* 642,000 Socorro Elec. Co-op,
Socorro, N. Mex.
400,000 Crawford Elec. Co-op,
Bourbon, Mo.
1,185,000 Coleman County Elec. Co-op,
Coleman, Texas
398,000 Central Texas Elec. Co-op,
Fredericksburg, Texas
53,000 North Plains Elec. Co-op,
Perryton, Texas
840,000 Vicilante Elec. Co-op,
Dillon, Mont.
110,000 Verendrye Elec. Co-op,
Velva, N. Dak.
9,968,000 Tri-State G & T Assn.,
Sterling, Colo.
625,000 Florida Keys Elec. Co-op,
Tavernier, Fla.
6,702,000 Rural Co-op Power Assn.,
Elk River, Minn.
7,500,000 Brazos Elec. Power Co-op,
Waco, Texas
* 50,000 Otero County Elec. Co-op,
Cloudcroft, N. Mex.
254,000 Marion Rural Elec. Co-op,
Marion, Ohio
310,000 Southside Elec. Co-op,
Crewe, Va.

Telephone

\$ 486,000 Deuel Tel. Co-op Ass'n.,
Clear Lake, S. Dak.
290,000 Butler Tel. Company
Butler, Ala.
1,040,000 Duo County Tel. Co-op Corp.,
Burksville, Ky.
88,000 Calhoun City Tel. Co.,
Calhoun City, Miss.
111,000 Santa Rosa Tel. Co-op,
Vernon, Texas
73,000 St. Stephen Tel. Co.,
St. Stephen, S. C.
507,000 Poland Tel. Company,
Poland Spring, Maine
72,000 Champaign County Tel. Co.,
Champaign, Ill.
546,000 Calvert Tel. System,
Calvert City, Ky.
73,000 Woodstock Tel. Co.,
Woodstock, Minn.
706,000 Chariton Valley Tel. Corp.,
Bucklin, Mo.
481,000 Grand River Mutual Tel. Corp.,
Princeton, Mo.

*—Includes Section 5 Funds